REMARKS/ARGUMENTS

By the *Office Action* of 2 April 2009, Claims 2-36 are pending in the Application, and all rejected. Applicant thanks Examiner with appreciation for the careful consideration and examination given to the Application.

Applicant submits this *Response and Amendment* solely to facilitate prosecution. As such, Applicant reserves the right to present new or additional claims in this Application that have similar or broader scope as originally filed. Applicant also reserves the right to present additional claims in a later-filed continuation application that have similar or broader scope as originally filed. Accordingly, any amendment, argument, or claim cancellation presented during prosecution is not to be construed as abandonment or disclaimer of subject matter.

By the present *Response and Amendment*, Claims 2, 6, 18, 21 and 25-26 are amended. No new matter is believed presented, and all pending Claims believed allowable.

1. Objection to the Drawings

In the *Office Action*, the *Drawings* are objected to, and Claims 6 and 25 are clarified herein. It is respectfully submitted the clarifications to these Claims overcome the objection.

2. Claim Rejections Under 35 USC § 112

In the *Office Action,* Claims 2-17 and 19-36 are rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. Applicant herein clarifies the terms "its" in Claims 2, 21 and 26 in various ways, and it is respectfully submitted that these clarifications overcome this ground of rejection.

3. The Claim Rejections Under §§ 102/103

In the *Office Action,* Claims 2-4, 7, 10-13, 16-17, 19-23 and 26-30 and 32-35 are rejected under 35 USC § 103(a) as allegedly being unpatentable by US Patent No. 3,992,932 to Venema, in view of GB Patent No. 2,312,193 to Searle. Claim 5 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Searle, and in further view of US Patent No. 6,305,145 to Suolahti. Claim 6 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Searle, and further in view of WO 0130643 to Roovers et

al. Claims 8-9 are rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view Searle, an further in view of US Patent Publication No. 20030087713 to Todd et al. Claim 14 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view Searle, an further in view of US Patent No. 3,832,899 to Nicolau. Claim 15 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Searle and Nicolau and Suolahti. Claim 18 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of US Patent No. 5,445,036 to Hordnes et al. Claim 24 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Searle and Suolahti. Claim 25 is rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Searle and Roovers et al. Claims 31 and 36 are rejected under 35 USC § 103(a) as allegedly being unpatentable over Venema in view of Searle, and further in view of US Patent No. 4,899,599 to Eddens.

All the pending Claims are respectfully shown novel and non-obvious over Venema and Searle combined, and non-obvious in combination with additional references, as none teach or suggest either that the sensor is loaded with the force difference of the chain halves, and that the transverse force sensor is located within the span of the coupling chain, as recited by the Claims.

All the independent Claims expressly recite that the sensor is loaded with the force *difference* on the sensor by the chain parts, which can be zero in rest, and neither Venema nor Searle nor their combination disclose such an arrangement, as, for example, the Venema-type arrangement is always loaded with the full chain tension force, even when the cyclist is not exerting any pedal force.

The Application specifically discloses this disadvantage of the Venema-type arrangement, wherein each sensor is always loaded with the full chain tension force, even when the cyclist is not exerting any pedal force, (US Patent Publication 20070099735, ¶¶ [0008-0011]), while in the case of the present invention, the sensor is loaded with the force *difference*, which can be zero in rest.

It is thus respectfully submitted that the pending Claims are novel and non-obvious over the cited art. The Claims are further patentable over the combination of Venema and Searle, and the other cited art, for the following reasons.

While the illustrating figure of Searle is similar to a figure illustrating the present invention, the operation of the device of Searle is quite different, and patentably distinct. According to Searle, the idler wheel C is movable and operates a switch, which in turn actuates a motor. Thus, the output action is only ON or OFF. Further, in order to be able to operate a switch in a reliable manner, the stroke of the idler wheel (i.e. the displacement distance) must be relatively large, causing a change in the shape of the chain, as clearly shown in **Fig. 1**, and thus disturbing the balance of the chain.

In contrast, the present invention as recited in, for example, Claim 21 and those ultimately dependent therefrom, provides an electrical output signal proportional to the force difference between upper chain half and lower chain half, allowing a controller to operate a motor such as to give propulsion force proportional to the chain force, or allowing a trainer to calculate the power generated by the user. By using strain gauges measuring the bending of a supporting arm supporting the measuring wheel, the displacement distance of the measuring wheel can actually be very small, i.e. 0.1 mm or even less, in contrast to the displacement distance of the idler wheel C of Searle, which will be on the order of about 10 mm.

Suolahti does not suggest to one of skill in the art that a bending sensor can be applied to the Venema apparatus. Augrende et al. does not suggest to one of skill in the art that a force sensor can be applied to the Venema apparatus. Additionally, Augrende et al. does not disclose a rotatable mounted transverse force sensor, as alleged in the *Office Action*, nor a force sensor mounted in any bearing - Augrende et al. just discloses a force sensor mounted under a stationary bearing of a rotating axle.

Todd does not suggest to one of skill in the art that a damper could advantageously be used in a transverse force sensor. It is thus respectfully submitted that the pending Claims are novel and non-obvious over Todd alone, and in combination with the other cited art.

4. Fees

This *Response and Amendment* is being filed within six months of the *Office Action*, and more specifically within three months. Thus, no extension of time fee payment is believed due.

No additional claim fees are believed due.

Nonetheless, authorization is hereby expressly given to charge any additional fees due to deposit account No. 20-1507.

CONCLUSION

By the present *Response and Amendment*, this Application has been placed in full condition for allowance. Accordingly, Applicant respectfully requests early and favorable action. Should the Examiner have any further questions or reservations, the Examiner is invited to telephone the undersigned Attorney at 404.885.2773.

Respectfully submitted,

Certificate of Transmission:
I hereby certify that this correspondence is being submitted by e-filing to the US Patent and Trademark Office in accordance with §1.8 on this date, via the EFS-Web electronic filing system.

/Ryan A. Schneider, Reg. #45083/

2 July 2009

/Ryan A. Schneider, Reg. #45083/

Ryan A. Schneider
Registration No. 45,083

Troutman Sanders LLP
Bank of America Plaza
600 Peachtree Street, N.E., Suite 5200
Atlanta, Georgia 30308-2216
United States
Phone: 404.885.2773
Fax: 404.962.6849